Patent Claims

1. Plate-link chain for a conical disk transmission, which plate-link chain is composed of rocker pressure member pairs (14a, 14b, 14c) and links (10) that extend transversely through the plate-link chain, that are arranged one after the other in several rows arranged alongside one another relative to the transverse direction of the plate-link chain, whereby each link is penetrated by two rocker pressure member pairs following one after the other in the longitudinal direction of the plate-link chain, each rocker pressure member pair penetrating at least two links of different rows offset relative to each other in the longitudinal direction of the plate-link chain, surfaces of rocker pressure member pairs facing away from each other in the longitudinal direction of the plate-link chain are in contact with opposite end sides of openings (16) of links offset from one another, surfaces of the rocker pressure members of a rocker pressure member pair facing each other form rolling surfaces (18_1, 18_2), upon which the rocker pressure members roll against each other when the plate-link chain is curved, and lateral end faces of the rocker pressure member pairs are formed for contact on conical surfaces of the conical disk pairs, characterized in that the rolling surfaces (18) of the rocker pressure members (14) are formed as freeform surfaces in such a way that changes in the distance between rocker pressure members (14_1, 14_2) rolling on one another during a mutual tilting of links (10) following one after the other in the longitudinal direction of the plate-link chain are at least partially compensated.

2. Plate-link chain for a conical disk transmission, which plate-link chain is composed of rocker pressure member pairs (14a, 14b, 14c) and links (10) that extend

transversely through the plate-link chain, that are arranged one after the other in several rows arranged alongside one another relative to the transverse direction of the plate-link chain, whereby each link is penetrated by two rocker pressure member pairs following one after the other in the longitudinal direction of the plate-link chain, each rocker pressure member pair penetrating at least two links of different rows offset relative to each other in the longitudinal direction of the plate-link chain, surfaces of rocker pressure member pairs facing away from each other in the longitudinal direction of the plate-link chain are in contact with opposite end sides of openings (16) of links offset from one another and surfaces of the rocker pressure members of a rocker pressure member pair facing each other form rolling surfaces (18_1, 18_2), upon which the rocker pressure members roll against each other when the plate-link chain is curved, lateral end faces of the rocker pressure member pairs are formed for contact on conical surfaces of the conical disk pairs, and the links of at least some of the adjacent rows have different lengths so that the distance between the end faces of the rocker pressure member pairs is different, characterized in that the rolling surfaces (18) of the rocker pressure members (14) are formed as freeform surfaces in such a way that the influence of the length of the rocker pressure members on the shortening of the effective chain length during rotation in a circular arc (polygon effect) is at least partially compensated.

3. Plate-link chain for a conical disk transmission, which plate-link chain is composed of rocker pressure member pairs (14a, 14b, 14c) and links (10) that extend transversely through the plate-link chain, that are arranged one after the other in

several rows arranged alongside one another relative to the transverse direction of the plate-link chain, whereby each link is penetrated by two rocker pressure member pairs following one after the other in the longitudinal direction of the plate-link chain, each rocker pressure member pair penetrating at least two links of different rows offset relative to each other in the longitudinal direction of the plate-link chain, surfaces of rocker pressure member pairs facing away from each other in the longitudinal direction of the plate-link chain are in contact with opposite end sides of openings (16) of links offset from one another, surfaces of the rocker pressure members of a rocker pressure member pair facing each other form rolling surfaces (18_1, 18_2), upon which the rocker pressure members roll against each other when the plate-link chain is curved, and lateral end faces of the rocker pressure member pairs are formed for contact on conical surfaces of the conical disk pairs, characterized in that the rolling surfaces (18) of the rocker pressure members (14) are formed as freeform surfaces in such a way that differences existing over the width of the plate-link chain in the forces transmitted by the rocker pressure member pairs (14a, 14b, 14c) between the links (10) are at least partially compensated.

4. Rocker pressure member for a plate-link chain according to claim 1 or 2, characterized in that the rolling surface (18) is described by the formula $R = R_0 \times f(\beta)$, wherein

R_0 = the radius of curvature of the rolling surface at a point P_0 of a cross-sectional plane, which extends longitudinally through the rocker pressure member and perpendicular to a reference plane containing the center of curvature O, and

R = the distance between the center of curvature O and a point P in the cross-sectional plane, wherein a straight line through O and P_0 and a straight line through O and P form an angle β with each other, and

$f(\beta)$ is a function that does not equal one for β different from zero.

5. Rocker pressure member according to claim 4, whereby $f(\beta) = \cos^n(\beta)$, with n a positive number.

6. Rocker pressure member for a plate-link chain according to claim 3, characterized in that the rolling surface (18) is a freeform surface of such a type that the rocker pressure member is thicker in its middle region than in its end regions relative to the width of the plate-link chain.

7. Rocker pressure member according to claim 6, characterized in that the rolling surface (18) is describable by the formula $R = R_0 f(\gamma)$, wherein R_0 = the radius of curvature of the rolling surface at a point P_0 of a cross-sectional plane through the center of the rocker pressure member, which cross-sectional plane extends longitudinally through the rocker pressure member and perpendicular to a reference plane containing the center of curvature O, and

R = the distance between the center of curvature O and a point P on the rolling surface, γ = the angle between the connecting straight lines OP and the longitudinal direction of the rocker pressure member.

8. Rocker pressure member according to claim 7, characterized in that the rolling surface (18) is describable by the formula $R = R_0 \times \sin^n \gamma \times \cos^m \beta$, wherein n and m are positive numbers, and β = the angle between the reference plane and a longitudinal direction plane of the rocker pressure member containing OP.